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## Recent Accomplishments Factsheet: 2014

Casco Bay Estuary Partnership

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# Recent Accomplishments



Through collaboration with its partners, the Casco Bay Estuary Partnership (CBEP) is devoted to protecting and restoring the water quality and fish and wildlife habitat of the Casco Bay ecosystem, while ensuring compatible human uses. Casco Bay is one of 28 "estuaries of national significance" designated by the U.S. Environmental Protection Agency.

The following are examples of recent accomplishments, January 2014.

## Promote Responsible Stewardship

### *Enhancing Stream Habitat and Water Quality*

CBEP awarded a Community-Based Habitat Enhancement Grant to the City of South Portland to enhance stream bank habitat in the City-owned Trout Brook Nature Preserve, a popular hiking destination for local residents. As part of this project, City staff, the South Portland Land Trust and community volunteers planted trees and shrubs, cleared small dams by hand, stabilized trails and used a City excavator to reconnect a section of the brook with its floodplain. Trout Brook passes by neighborhoods, schools and farms before draining to the Fore River. Although it currently supports brook trout, eels and other native aquatic species, sections of the stream do not meet State water classifications. There are signs of progress, however, and Trout Brook has good potential to one day look much more like a typical Maine stream, with plenty of dissolved oxygen and a rich diversity of aquatic species.

## Open and Protect Shellfish Beds

### *Green Crab and Rapid Ecosystem Changes*

Clammers in eastern Casco Bay have reported a dramatic decline in shellfish populations. Many harvesters think that the culprit to this decline is the abundant invasive green crab. Green crabs are also likely contributing to extensive declines in eelgrass. CBEP is working hard to understand and respond to these troubling and exceptionally rapid changes in Maine's coastal ecosystems. We are working with scientists from local colleges and other organizations to gather information on causes and potential management responses. In December, CBEP participated in the Maine Green Crab Summit, a dialogue between harvesters, scientists and resource managers aimed at exchanging information about the species and its impacts, management options and future research directions. The Summit was sponsored by Maine Sea Grant, Maine Department of Marine Resources, Maine Coastal Program and USGS.

## Protect and Restore Habitat

### *Improving Fish Passage on the Royal River in Yarmouth*

As part of a broader collaborative effort to return sea-run fish to the Royal River, the Town of Yarmouth, Maine Rivers, CBEP, US Fish and Wildlife Gulf of Maine Coastal Program and Project SHARE pooled funding and staff to manually remove dozens of 6,000 lb. granite blocks from the Royal River. The project, dubbed "Royal River Rolling Stones," involved moving refrigerator-sized granite blocks from a collapsed historic mill structure. These stones had been impeding fish movement around a steep waterfall. The site was inaccessible to heavy machinery, requiring all work to be done by hand using grip hoists to slowly winch the blocks out of the river and onto the bank. This small improvement in fish passage helps maintain momentum toward the goal of removing all barriers along the river, thus providing anadromous fish access to upstream habitat.

The work of the Casco Bay Estuary Partnership is guided by the *Casco Bay Plan*, which identifies five key goals for watershed protection:

1. Promote responsible stewardship
2. Open and protect shellfish beds and swimming beaches
3. Protect and restore habitat
4. Reduce toxic pollution
5. Minimize pollution loading from stormwater and combined sewer



Photo by Fred Dillon

Workers from the City of South Portland restoring Trout Brook



Photo by Doug Snow

The invasive Green Crab



Photo from the City of Portland

Workers attaching grip hoists to granite blocks in the Royal River

## Protect and Restore Habitat

### **Sea Level Rise and Coastal Wetlands**

With funding from the Maine Coastal Program and the Environmental Protection Agency, CBEP staff completed a detailed analysis of the impact of sea level rise on coastal wetlands along the shore of Casco Bay. The information was gathered and shared in order to help municipal staff and decision makers understand the potential impacts of sea level rise and to provide science-based projections to inform policy. As part of this process, CBEP also provided a detailed analysis of 15 priority restoration sites where tidal flow is now restricted. Tidal flow restoration is viewed by scientists as critical for giving marshes a fighting chance to persist in response to sea level rise.

## Minimize Pollution From Stormwater

### **Long Creek Watershed Management District**

The Long Creek Watershed Management District continues to work to restore water quality in the Long Creek watershed in South Portland. In response to consistently poor water quality, a diverse group of stakeholders, including CBEP, commercial property owners and four local town governments, developed a watershed management plan aimed at cleaning up the Creek. Projects to clean up the Creek are ongoing, and the monitoring program is comprehensive. This innovative project takes a proactive, collaborative approach to stemming water pollution and is funded by a unique public-private partnership.

## Watershed Management

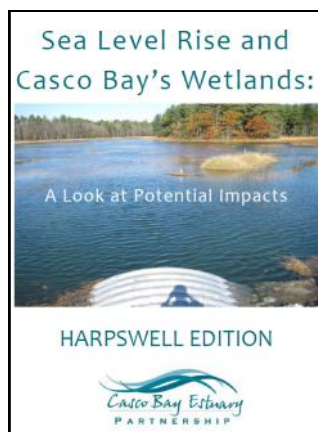
### **Land Conservation in the Lower Presumpscot River Watershed: Vision, Values, and Priorities**

CBEP worked closely with the Presumpscot River Watershed Coalition to develop a report on conservation vision and land protection priorities for the lower Presumpscot River watershed. This collaborative, multi-year project was funded over three years by the Environmental Funders Network, and it brought together multiple stakeholders to identify shared priorities for land protection. The resulting report focuses on large scale priorities in order to help align the goals of land trusts and communities. Attention has now turned to how best to implement the vision, and several land acquisitions within the priority areas are anticipated in the coming years.

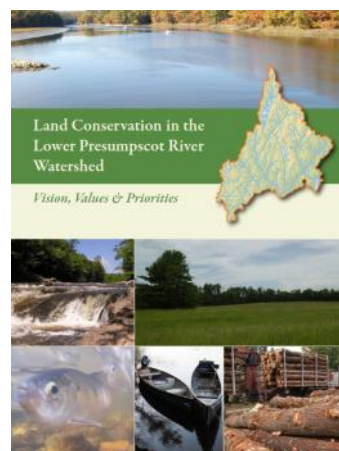
## Monitoring

### **Responding to Dramatic Declines in Eelgrass**

CBEP, the Maine Department of Environmental Protection and Friends of Casco Bay collaborated on a project to survey Casco Bay's eelgrass coverage during the summer of 2013. The study compared new aerial photos taken at low tide with data from 1993 and 2001. The 2013 eelgrass coverage data shows huge losses, particularly in Maquoit and Middle Bays. Hundreds of acres of intertidal and subtidal eelgrass beds are gone. Though eelgrass is sensitive to water quality conditions, anecdotal evidence suggests that the decline could be related to the increase in invasive green crabs. CBEP is working with partners to establish plans for long term monitoring and future research. Eelgrass beds provide food and cover for many marine animals, including commercially important fisheries.



*Completed analysis of sea level rise for the town of Harpswell*



*Final report for the Land Conservation in the Lower Presumpscot River Watershed project*



*This map of Middle and Maquoit Bays shows historic eelgrass beds in yellow and current eel grass beds in light green, showing huge losses*

*Protecting and restoring the ecological integrity of the Casco Bay watershed*



The Casco Bay Estuary Partnership works to protect and restore the water quality and fish and wildlife habitat of the Casco Bay ecosystem, while ensuring compatible human uses.